

Audit



Report

OFFICE OF THE INSPECTOR GENERAL

**PROCUREMENT OF SECONDARY EXHAUST SEAL AND
SECONDARY EXHAUST FLAP FOR THE F404 ENGINE**

Report No. 93-088

April 21, 1993

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Department of Defense

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The following acronyms are used in this report

ASO.....Navy Aviation Supply Office
BOA.....Basic Ordering Agreement
FAR.....Federal Acquisition Regulation
NIPO.....Navy International Programs Office



**INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884**

**REPORT
NO. 93-088**

April 21, 1993

**MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (FINANCIAL
MANAGEMENT)**

**SUBJECT: Report on the Audit of Procurement of Secondary
Exhaust Seal and Secondary Exhaust Flap for the
F404 Engine (Project No. OCH-5017.01)**

Introduction

We are providing this final report for your information and use. The audit was in response to a DoD Hotline complaint received during our audit of the procurement of spare parts and supplies (Project No. OCH-5017). The complainant alleged that the Navy Aviation Supply Office (ASO) was avoiding competition by using an Air Force basic ordering agreement (BOA) to procure secondary exhaust seals and secondary exhaust flaps for the F404 engine and paying higher prices than if the procurements were competitive. The audit objectives were to determine whether ASO followed Federal and DoD acquisition regulations when procuring the secondary exhaust seal and flap, and to examine applicable internal controls.

We concluded that ASO followed appropriate acquisition regulations. ASO used an Air Force BOA with General Electric Aircraft Engines and competitive contracts with other sources to procure the parts. The noncompetitive procurements using the Air Force BOA were properly justified and approved. However, the prices on the noncompetitive procurements were higher than the prices on the competitive procurements. The differences in the prices paid clearly show the monetary benefits of competitive purchases of the parts.

Scope of Audit

Audit methodology. To determine if ASO followed applicable acquisition regulations, we reviewed procurement histories, contracting documents, justification and approval documents, and procedures ASO used to procure the secondary exhaust seal and the secondary exhaust flap during the period March 1, 1990, through February 17, 1993. We reviewed nine procurements valued at \$24,887,907. We also discussed the procurements with cognizant Government officials. We reviewed computerized procurement histories

which were determined to be accurate for our audit purposes. Enclosure 2 lists the activities visited or contacted during the audit.

Audit period and standards. This economy and efficiency audit was performed from August 27, 1992, through February 17, 1993, in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Accordingly, we included such tests of internal controls as were considered necessary.

Internal Controls

We evaluated the procurement procedures ASO followed when awarding the contracts for the secondary exhaust seal and flap. We considered internal controls to be adequate in that no material internal control weaknesses were identified.

Prior Audit Coverage

No prior audits addressed ASO procurements of the secondary exhaust seal and the secondary exhaust flap.

Discussion

Secondary exhaust seal and flap. The secondary exhaust seal (NSN 5330-01-130-2777) and the secondary exhaust flap (NSN 2840-01-130-2780) are parts of the F404 engine manufactured by General Electric and installed in F/A-18 aircraft. The parts are complex and must meet critical operational and reliability requirements. Each new supplier (source) must be approved by the Naval Air Systems Command and must pass first-article tests before entering into production.

Approved sources. Before March 1990, Naval Air Systems Command had approved two sources for the secondary exhaust seal and one source for the secondary exhaust flap. Naval Air Systems Command approved an additional source for the seal in March 1990, and approved four additional sources for the flap in May and September 1991. ASO procurement history documents show that, before additional sources were approved, both flaps and seals were procured from General Electric Aircraft Engines. After the additional sources were approved, contracts were awarded to General Electric only when requested by a foreign military sales customer or when the other approved sources could not provide the parts in the time required.

Procurements. ASO made four procurements of the secondary exhaust seal and five procurements of the secondary exhaust flap from March 1, 1990, through February 17, 1993. Of the nine procurements, five were noncompetitive contract awards, valued at \$12,329,652, to General Electric under an Air Force BOA, and four were competitive contract awards, valued at \$12,558,255, to B.H. Aircraft Company, Incorporated, and Electro Methods, Incorporated.

Procurement procedures. ASO followed appropriate procurement procedures for the competitive and noncompetitive procurements of the secondary exhaust seal and the secondary exhaust flap. Detailed information on each procurement is provided in Enclosure 1. Summary information on the procurements follows.

Competitive procurements. For three of the four competitive procurements (contracts N00383-90-C-4749, N00383-91-C-4801, and N00383-92-C-E259), ASO solicited all approved sources and awarded the contracts to the low bidders. The contract awards met the requirement of the Federal Acquisition Regulation (FAR) part 6, "Competition Requirements," that all responsible sources be permitted to compete. The fourth competitive procurement was a small business set-aside. ASO solicited approved small businesses and awarded contract N00383-93-C-M053 to the low bidder. The award met the requirement of FAR subpart 19.5, "Set-Asides for Small Business," that offers be obtained from at least two responsible small business concerns.

Noncompetitive procurements. Four of the five noncompetitive procurements (contracts F34601-89-G-6672-GC74 (two awards), F34601-89-G-6672-GB41, and F34601-91-G-7713-GB93) were made either at the specific request of a foreign military sales customer or when other approved sources could not deliver the parts within required time frames. The noncompetitive contract awards were properly justified and approved under either FAR 6.302-4, "International Agreement," or FAR 6.302-2, "Unusual and Compelling Urgency." ASO was unable to locate the contract file on the fifth noncompetitive procurement (contract F34601-89-G-6672-GB2R). However, this sole source award was justified because General Electric was the only approved source for the secondary exhaust flap at the time of the award.

Contract prices. As shown in the following table, the prices on the noncompetitive procurements from General Electric were significantly higher than the prices on the competitive procurements from B.H. Aircraft and Electro Methods. The differences in the prices paid clearly show

the monetary benefits of procuring the secondary exhaust seal and flap competitively rather than sole source from the engine manufacturer.

Contract Awards

Secondary Exhaust Seal, NSN 5330-01-130-2777

| <u>Contract</u> | <u>Award Date</u> | <u>Contractor</u> | <u>Quantity</u> | <u>Unit Price</u> |
|------------------------------------|-----------------------|-------------------|-----------------|-----------------------|
| F34601-89-G-6672-GB41 ¹ | Mar. 2, 1990 | General Electric | 4,970 | \$1,405 |
| F34601-89-G-6672-GC74 ¹ | Sept. 8, 1990 | General Electric | 130 | 1,897 |
| N00383-90-C-4749 ² | Mar. 23, 1990 | B.H. Aircraft | 4,552 | 1,234 |
| N00383-92-C-E259 ² | July 31, 1992 | B.H. Aircraft | 2,716 | 987 |

Secondary Exhaust Flap, NSN 2840-01-130-2780

| <u>Contract</u> | <u>Award Date</u> | <u>Contractor</u> | <u>Quantity</u> | <u>Unit Price</u> |
|------------------------------------|-----------------------|-------------------|-----------------|-----------------------|
| F34601-89-G-6672-GC74 ¹ | Sept. 28, 1990 | General Electric | 130 | \$2,177 |
| F34601-89-G-6672-GB2R ¹ | Dec. 14, 1990 | General Electric | 1,084 | 1,419 |
| F34601-91-G-7713-GB93 ¹ | May 12, 1992 | General Electric | 1,990 | 1,647 |
| N00383-91-C-4801 ² | Sept. 12, 1991 | Electro Methods | 3,584 | 832 |
| N00383-93-C-M053 ² | Dec. 2, 1992 | Electro Methods | 1,861 | 687 |

¹ Noncompetitive procurement using BOA.

² Competitive procurement.

We provided a draft of this report to the Assistant Secretary of the Navy (Financial Management) on March 8, 1993. Because the report contains no recommendations, no management comments were required and none were received. Any comments on this final report should be provided by May 21, 1993.

The cooperation extended to the audit staff is appreciated. If you have any questions on this audit, please contact Mr. Garold E. Stephenson, Program Director, at (703) 692-3179 (DSN 222-3179) or Mr. Eugene E. Kissner, Project Manager, at (703) 692-3128 (DSN 222-3128). A list

of the audit team members is provided in Enclosure 3.
Enclosure 4 lists the planned distribution of this report.



Edward R. Jones
Deputy Assistant Inspector
General for Auditing

Enclosures

cc:
Secretary of the Navy

PROCUREMENT DETAILS

Secondary Exhaust Seal, NSN 5330-01-130-2777

ASO made four procurements of the secondary exhaust seal between March 1, 1990, and February 17, 1993.

March 1990 Procurements. ASO awarded contract F34601-89-G-6672-GB41 on March 2, 1990, and contract N00383-90-C-4749 on March 23, 1990, to fill a requirement for 9,522 seals. ASO received proposals for the requirement from General Electric Aircraft Engines and B.H. Aircraft Company. B.H. Aircraft submitted the low bid. However, B.H. Aircraft was a new supplier of the part and was required to undergo first-article testing. Delivery of production quantities would commence 740 days after date of contract award. The use rate and stock position of the part showed that the Navy would run out of the seals before B.H. Aircraft could deliver production quantities. Consequently, ASO split the award between B.H. Aircraft and General Electric, with B.H. Aircraft receiving a contract for the non-urgent portion of the requirement. B.H. Aircraft was awarded contract N00383-90-C-4749 for 4,552 seals at \$1,234 per unit, with delivery of production quantities to begin 710 days after the date of the contract. General Electric was awarded contract F34601-89-G-6672-GB41 for 4,970 seals at \$1,405.33 per unit. The contract required General Electric to commence delivery of production quantities in July 1990, 120 days after contract award. ASO justified and approved this noncompetitive award under FAR 6.302-2 to support fleet requirements until B.H. Aircraft could begin delivery under contract N00383-90-C-4749.

September 1990 Procurement. ASO awarded contract F34601-89-G-6672-GC74 on September 8, 1990, to General Electric for 130 seals at \$1,896.77 per unit for a foreign military sale to Kuwait. ASO justified and approved this noncompetitive award under FAR 6.302-4 in response to a Government of Kuwait request that F404 engine parts and support be procured from General Electric. In June 1989, the Government of Kuwait requested the Navy, in writing, to procure parts and technical support for the F404 engine from General Electric to maintain single-vendor integrity. The Director, Navy Office of Technology Transfer and Security Assistance, now the Director, Navy International Programs Office (NIPO), approved this request, and in September 1989, the United States and Kuwait executed an agreement that parts and technical support for the F404 engine would be procured from General Electric. The

PROCUREMENT DETAILS (cont'd)

Navy did not inform Kuwait that the secondary exhaust seals and flaps were available from other sources at lower costs. A NIPO official stated that this information would not have influenced the position of Kuwaiti officials who wanted spare parts and support for their F/A-18 aircraft procured from prime contractors for the aircraft and major components.

July 1992 Procurement. ASO awarded contract N00383-92-C-E259 on July 31, 1992, to B.H. Aircraft for 2,716 seals at \$987 per unit. This was a competitive procurement for fleet requirements. B.H. Aircraft submitted the low bid. The award met the requirement of FAR part 6, that all responsible sources be permitted to compete.

Secondary Exhaust Flap, NSN 2840-01-130-2780

ASO made five procurements of the secondary exhaust flap between March 1, 1990, and February 17, 1993.

September 1990 Procurement. ASO awarded contract F34601-89-G-6672-GC74 on September 28, 1990, to General Electric for 130 flaps at \$2,176.58 per unit for a foreign military sale to Kuwait. ASO justified and approved this noncompetitive award under FAR 6.302-4 because of the agreement between the United States and Kuwait that F404 engine parts for Kuwait be procured from General Electric and because no other sources were approved for the part at the time.

December 1990 Procurement. ASO awarded contract F34601-89-G-6672-GB2R on December 14, 1990, to General Electric for 1,084 flaps at \$1,419 per unit. Because ASO was unable to locate the contract file for this procurement, specific details on the contract award were not available. However, the noncompetitive award was justified because General Electric was still the only approved source for the part. Additional sources for the secondary exhaust flap were not approved until May and September 1991.

September 1991 and May 1992 Procurements. ASO awarded contract N00383-91-C-4801 on September 12, 1991, to Electro Methods, Incorporated, for 3,584 flaps at \$832 per unit. This was a competitive procurement and Electro Methods was the low bidder. Because Electro Methods was a new supplier, the contract included a requirement for

PROCUREMENT DETAILS (cont'd)

first-article testing with delivery of the first production lot to commence in April 1993. In May 1992, the Navy was unable to meet fleet requirements for this part, and Electro Methods could not expedite delivery. All other approved sources, except General Electric, were required to pass first-article testing before entering into production and could not deliver the flaps in time to meet fleet requirements. Consequently, ASO awarded contract F34601-91-G-7713-GB93 on May 12, 1992, to General Electric for 1,990 flaps at \$1,646.95 per unit. The contract required delivery of 1,102 flaps 7 days after contract award and complete delivery of the total procurement quantity within 90 days. ASO justified and approved the sole-source award under FAR 6.302-2 to support fleet requirements until Electro Methods could start delivery of production quantities in April 1993 under contract N00383-91-C-4801.

December 1992 Procurement. ASO awarded contract N00383-93-C-M053 on December 2, 1992, to Electro Methods for 1,861 flaps at \$687 per unit. This procurement was a competitively awarded small business set-aside. ASO solicited 21 small business concerns and received 5 bids. Electro Methods was the low bidder. The award met the requirement of FAR subpart 19.5, that offers be obtained from at least two responsible small business concerns.

ACTIVITIES VISITED OR CONTACTED

Department of the Navy

Navy International Programs Office, Washington, DC
Naval Air Systems Command, Washington, DC
Navy Aviation Supply Office, Naval Supply Systems Command,
Philadelphia, PA

Defense Activities

Defense Security Assistance Agency, Washington, DC
Defense Plant Representative Office, General Electric
Aircraft Engines, Lynn, MA

LIST OF AUDIT TEAM MEMBERS

David K. Steensma, Director, Contract Management Directorate
Garold E. Stephenson, Audit Program Director
Eugene E. Kissner, Audit Project Manager
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